Listing of Claims:

1 - 41 (Canceled)

42. (Original) A method for splitting words in a language vocabulary V in an automatic speech recognition system to provide vocabulary compression, wherein the vocabulary V has a fixed size, the method comprising the steps of:

(a) providing a fixed set of allowable endings, including an empty ending;

(b) providing a fixed set of constraints for splitting words into stems;

(c) initializing a split map of words and the corresponding stems and endings by setting a variable t to a predetermined value, and selecting a first word from the fixed vocabulary;

(d) randomly splitting the first word to generate an ending from the fixed list of allowable endings and a stem;

(e) defining and storing a stem set containing the stem generated at said splitting step (d) and a word set containing the first word;

(f) determining whether t is less than the size of the vocabulary V;

(g) obtaining a new word from the vocabulary V, when t is less than the size of the vocabulary V;

(h) determining possible splits for the new word to generate stems and endings therefrom, using the fixed set of allowable endings and the fixed set of constraints;

(i) determining whether there is a split for the new word that generates a previously stored stem of the stem set;

(j) splitting the current word into the previously stored stem and an ending of the set of allowable endings, when there is a split for the new word that generates the previously stored stem of the stem set;

(k) determining whether another previously stored stem in the stem set can be replaced by a new stem generated at step (h), when there is no split for the current word that generates the previously stored stem of the stem set;

(l) redefining the stem set and the split map to include the new stem generated at step (h) in place of the other previously stored stem, when the other previously stored stem can be replaced by the new stem, when the other previously stored stem can be replaced by the new stem generated at step (h);

(m) redefining the stem set to include any new stem into which the current word may be split and extending the split map to include the current word by splitting the new word into the new stem, when the other previously stored stem in the stem set cannot be replaced by the new stem generated at step (h); and

(n) incrementing t and returning to step (f) if t is less than the size of the vocabulary V.

43. (Original) The method of claim 42, further comprising the step of terminating the method if t is not less than the size of the fixed vocabulary.

44. (Original) The method of claim 42, wherein said determining step (k) comprises the step of determining whether other words stored in the word set during previous iterations will remain split after such substitution.

45. (Original) The method of claim 42, wherein the vocabulary is sorted such that the words in the language vocabulary V are numerated in descending order based on frequencies associated with each of the words.

46. (Original) The method of claim 42, wherein step (j) further comprises the step of extending the split map to the new word.

47. (Original) The method of claim 42, wherein step (i) generates all possible splits for the new word.

48. - 59. (Canceled)

60. (Previously presented) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for splitting words in a language vocabulary V in an automatic speech recognition system to provide vocabulary compression, wherein the vocabulary V has a fixed size, the method comprising the steps of:

(a) providing a fixed set of allowable endings, including an empty ending;

(b) providing a fixed set of constraints for splitting words into stems;

(c) initializing a split map of words and the corresponding stems and endings by setting a variable t to a predetermined value, and selecting a first word from the fixed vocabulary;

(d) randomly splitting the first word to generate an ending from the fixed list of allowable endings and a stem;

(e) defining and storing a stem set containing the stem generated at said splitting step (d) and a word set containing the first word;

(f) determining whether t is less than the size of the vocabulary V;

(g) obtaining a new word from the vocabulary V, when t is less than the size of the vocabulary V;

(h) determining possible splits for the new word to generate stems and endings therefrom, using the fixed set of allowable endings and the fixed set of constraints;

(i) determining whether there is a split for the new word that generates a previously stored stem of the stem set;

(j) splitting the current word into the previously stored stem and an ending of the set of allowable endings, when there is a split for the new word that generates the previously stored stem of the stem set;

(k) determining whether another previously stored stem in the stem set can be replaced by a new stem generated at step (h), when there is no split for the current word that generates the previously stored stem of the stem set;

(l) redefining the stem set and the split map to include the new stem generated at step (h) in place of the other previously stored stem, when the other previously stored stem can be replaced by the new stem, when the other previously stored stem can be replaced by the new stem generated at step (h);

(m) redefining the stem set to include any new stem into which the current word may be split and extending the split map to include the current word by splitting the new word into the new stem, when the other previously stored stem in the stem set cannot be replaced by the new stem generated at step (h); and

(n) incrementing t and returning to step (f) if t is less than the size of the vocabulary V.